

CLAIMS

1. (Previously Presented) An implant adapted to be placed between spinous processes comprising:

a body that includes a shaft; wherein the shaft is radiopaque;

a spacer rotatably mounted on the shaft; and

a tissue expander extending from the shaft;

wherein the tissue expander is at least in part radiolucent, wherein the partially radiolucent tissue expander distracts the soft tissue and the spinous processes while not impairing the ability to view the spinous processes in an x-ray.

2. (Original) The implant of claim 1 wherein the tissue expander is selected from the group consisting of polyetheretherketone, polyetherketoneketone, polyaryletheretherketone, polyetherketone, polyetherketoneetherketoneketone, and polyetheretherketoneketone.

3. (Original) The implant of claim 1 wherein the spacer has a cross-sectional shape selected from the group consisting of elliptical-shaped, cylindrical-shaped, ovoid-shaped, oval-shaped, track-shaped, and rectangular-shaped with curved ends.

4. (Original) The implant of claim 1 wherein the spacer has a dimension selected from the group consisting of 6 mm, 8 mm, 10 m, 12 mm, and 14 mm.

5. (Original) The implant of claim 1 wherein the spacer has an off-center bore that receives the shaft so that the spacer can rotate about the shaft.

6. (Original) The implant of claim 1 wherein the tissue expander has a generally increasing cross-section from an end location to a location adjacent to the spacer.

7. (Original) The implant of claim 1 wherein the body includes a first wing extending from a location on the shaft on an opposite side of the spacer from which the tissue expander extends.

8. (Original) The implant of claim 1 wherein the shaft includes an attachment to which the tissue expander is affixed.

9. (Original) The implant of claim 8 wherein the attachment includes a device for receiving a wing.

10. (Original) The implant of claim 1 wherein the body includes a first wing extending from a location on the shaft on an opposite side of the spacer from which the tissue expander extends.

11. (Original) The implant of claim 10 wherein the body and the first wing are radiopaque such that under x-ray the implant resembles a T-shape.

12. (Original) The implant of claim 1 wherein the spacer is at least in part radiolucent.

13. (Original) The implant of claim 12 wherein at least one of the spacer and the tissues expander are selected from the group consisting of polyetheretherketone, polyetherketoneketone, polyaryletheretherketone, polyetherketone, polyetherketoneetherketoneketone, and polyetheretherketoneketone.

14. (Original) The implant of claim 1 further including:

a first wing located at one end of the shaft and a second wing located adjacent to the tissue expander such that the spacer is located between the first and the second wings, wherein the body, the shaft, and the first and second wings are radiopaque and the tissue expander and spacer are radiolucent such that under imaging the implant resembles an H-shape.

15. (Original) The implant of claim 1 wherein the shaft includes an attachment to which the tissue expander is molded.

16. (Original) The implant or claim 15 wherein the attachment includes a device for receiving a wing.

17. (Original) The implant of claim 1 wherein the spacer includes:

an inner spacer that is rotatably mounted about the shaft; and
an outer spacer that is movably mounted on the inner spacer.

18. (Original) The implant of claim 17 wherein:

the inner spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends; and

the outer spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends.

19. (Previously Presented) An implant adapted to be placed between spinous processes comprising:

a body that includes a shaft; wherein the shaft is radiopaque; and

a spacer rotatably mounted on the shaft;

a tissue expander extending from the shaft;

wherein the tissue expander is at least in part radiolucent, and

wherein the spacer is at least in part radiolucent, wherein the partially radiolucent tissue expander distracts the soft tissue and the spinous processes while not impairing the ability to view the spinous processes in an x-ray.

20. (Original) The implant of claim 19 including a wing located adjacent to the spacer.

21. (Original) The implant of claim 19 wherein at least one of the spacer and the tissues expander are selected from the group consisting of polyetheretherketone, polyetherketoneketone, polyaryletheretherketone, polyetherketone, polyetherketoneetherketoneketone, and polyetheretherketoneketone.

22. (Original) The implant of claim 19 wherein the tissue expander is selected from the group consisting of polyetheretherketone, polyetherketoneketone, polyaryletheretherketone, polyetherketone, polyetherketoneetherketoneketone, and polyetheretherketoneketone.

23. (Original) The implant of claim 19 wherein the tissue expander has a generally increasing cross-section from a distal end to a location adjacent to the spacer.

24. (Original) The implant of claim 19 wherein the implant has a first wing wherein the body and the first wing are radiopaque and the tissue expander and the spacer are radiolucent such that under imaging the implant resembles a T-shape.

25. (Original) The implant of claim 19 further including:
a first wing located at one end of the shaft and a second wing located adjacent to the tissue expander such that the spacer is located between the first and the second wings, wherein the body, the shaft, and the first and second wings are radiopaque and the tissue expander and spacer are radiolucent such that under imaging the implant resembles an H-shape.

26. (Original) The implant of claim 19 wherein the spacer has a cross-sectional shape selected from the group consisting of elliptical-shaped, cylindrical-shaped, ovoid-shaped, oval-shaped, track-shaped, and rectangular-shaped with curved ends.

27. (Original) The implant of claim 19 wherein the spacer has a dimension selected from the group consisting of 6 mm, 8 mm, 10 m, 12 mm, and 14 mm.

28. (Original) The implant of claim 19 wherein the spacer has an off-center bore that receives the shaft so that the spacer can rotate about the shaft.

29. (Original) The implant of claim 19 wherein the spacer includes:
an inner spacer that is rotatably mounted about the shaft; and
an outer spacer that is movably mounted on the inner spacer.

30. (Original) The implant of claim 27 wherein:
the inner spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends; and
the outer spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends.

31. (Original) The implant of claim 19 wherein the body includes a first wing extending from a location on the shaft on an opposite side of the spacer from which the tissue expander extends.

32. (Original) The implant of claim 31 wherein the body and the first wing are radiopaque and the tissue expander and spacer are radiolucent such that under imaging the implant resembles a T-shape.

33. (Original) The implant of claim 19 wherein the shaft includes an attachment to which the tissue expander is affixed.

34. (Original) The implant of claim 33 wherein the attachment includes a device that can receive a wing.

35. (Original) The implant of claim 19 wherein the shaft includes an attachment to which the tissue expander is molded.

36. (Original) The implant or claim 35 wherein the attachment includes a device that can receive a wing.

37. (Previously Presented) An implant adapted to be placed between spinous processes comprising:

a body including a shaft; wherein the shaft is radiopaque;

a spacer rotatably mounted on the shaft;

a tissue expander extending from the shaft wherein the tissue expander is at least in part radiolucent; and

wherein the tissue expander is at least in part selected from the group consisting of polyetheretherketone, polyetherketoneketone, and polyaryletheretherketone ; and wherein the spacer is at least in part selected from the group consisting of polyetheretherketone, polyetherketoneketone, and polyaryletheretherketone, wherein the tissue expander distracts the soft tissue and the spinous processes while not impairing the ability to view the spinous processes in an x-ray.

38. (Original) The implant of claim 37 further including:

a first wing located at one end of the shaft and a second wing located adjacent to the tissue expander such that the spacer is located between the first and the second wings, wherein the body, the shaft, and the first and second wings are radiopaque such that under imaging the implant resembles an H-shape.

39. (Original) The implant of claim 37 wherein the shaft includes an attachment to which the tissue expander is molded.

40. (Original) The implant of claim 37 wherein the spacer has a cross-sectional shape selected from the group consisting of elliptical-shaped, cylindrical-shaped, ovoid-shaped, oval-shaped, track-shaped, and rectangular-shaped with curved ends.

41. (Original) The implant of claim 37 wherein the spacer has a dimension selected from the group consisting of 6 mm, 8 mm, 10 m, 12 mm, and 14 mm.

42. (Original) The implant of claim 37 wherein the spacer has an off-center bore that receives the shaft so that the spacer can rotate about the shaft.

43. (Original) The implant of claim 37 wherein the shaft includes an attachment to which the tissue expander is affixed.

44. (Original) The implant of claim 43 wherein the attachment includes a device for receiving a wing.

45. (Original) The implant of claim 37 wherein the spacer includes:
an inner spacer that is rotatably mounted about the shaft; and
an outer spacer that is movably mounted on the inner spacer.

46. (Original) The implant of claim 45 wherein:
the inner spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends; and
the outer spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends.

47. (Previously Presented) An implant adapted to be placed between spinous processes comprising:
a body includes a shaft; wherein the shaft is radiopaque;
a spacer rotatably mounted on the shaft;

a tissue expander extending from the shaft;
wherein the tissue expander is at least in part radiolucent; and
wherein the tissue expander is at least in part selected from the group consisting of
polyetheretherketone, polyetherketoneketone, polyaryletheretherketone,
polyetherketone, polyetherketoneetherketoneketone, and polyetheretherketoneketone,
wherein the tissue expander distracts the soft tissue and the spinous processes while
not impairing the ability to view the spinous processes in an x-ray.

48. (Original) The implant of claim 47 wherein the spacer is at least in part selected from
the group consisting of polyetheretherketone, polyetherketoneketone,
polyaryletheretherketone, polyetherketone, polyetherketoneetherketoneketone, and
polyetheretherketoneketone.

49. (Original) The implant of claim 37 wherein the body includes a first wing extending
from a location on the shaft on an opposite side of the spacer from which the tissue
expander extends.

50. (Original) The implant of claim 47 wherein the tissue expander has a generally
increasing cross-section from a distal end to a location adjacent to the spacer.

51. (Original) The implant of claim 49 wherein the body and the first wing are
radiopaque such that under imaging the implant resembles a T-shape.

52. (Original) The implant of claim 48 further including:

a first wing located at one end of the shaft and a second wing located adjacent to the tissue expander such that the spacer is located between the first and the second wings, wherein the body, the shaft, and the first and second wings are radiopaque such that under imaging the implant resembles an H-shape.

53. (Original) The implant of claim 47 wherein the shaft includes an attachment to which the tissue expander is affixed.

54. (Original) The implant of claim 47 wherein the spacer has a dimension selected from the group consisting of 6 mm, 8 mm, 10 m, 12 mm, and 14 mm.

55. (Original) The implant of claim 47 wherein the spacer has a cross-sectional shape selected from the group consisting of elliptical-shaped, cylindrical-shaped, ovoid-shaped, oval-shaped, track-shaped, and rectangular-shaped with curved ends.

56. (Original) The implant of claim 47 wherein the spacer has an off-center bore that receives the shaft so that the spacer can rotate about the shaft.

57. (Original) The implant of claim 47 wherein the shaft includes an attachment to which the tissue expander is molded.

58. (Original) The implant of claim 57 wherein the attachment includes a device for receiving a wing.

59. (Original) The implant or claim 58 wherein the attachment includes a device for receiving a wing.

60. (Original) The implant of claim 47 wherein the spacer includes:
an inner spacer that is rotatably mounted about the shaft; and
an outer spacer that is movably mounted on the inner spacer.

61. (Original) The implant of claim 60 wherein:
the inner spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends; and
the outer spacer has one of flattened or slightly radiused upper and lower surfaces and rounded ends.

62. (Previously Presented) An implant adapted to be placed between spinous processes comprising:
a body having a shaft extending therefrom;
a spacer rotatably mounted on the shaft; and
a tissue expander extending from the shaft,
wherein the body and the shaft are radiopaque, and further wherein the spacer and the tissue expander are radiolucent, wherein the partially radiolucent tissue expander

distracts the soft tissue and the spinous processes while not impairing the ability to view the spinous processes in an x-ray.

63. (Original) The implant of claim 62 wherein the spacer and tissue expander are selected from the group consisting of polyetheretherketone and polyetherketoneketone.

64. (Original) The implant of claim 62 wherein the spacer is comprised of: an inner spacer that is rotatably mounted about the shaft; and an outer spacer that is movably mounted relative to the inner spacer.

65. (Original) The implant of claim 62 wherein:
the inner spacer has one of a flattened or a slightly radiused upper and lower surfaces and rounded first and second end; and
the outer spacer has one of a flattened or a slightly radiused upper and lower surfaces and rounded first and second ends.

66. (Original) The implant of claim 64 wherein the inner spacer and the outer spacer are selected from the group consisting of polyetheretherketone, polyetherketoneketone, and polyaryletheretherketone.

67. (Original) The implant of claim 62 further comprising a first and second wing, wherein the wings are located at opposite ends of the spacer and wherein the body, shaft and wings are a radiopaque "H" on imaging film.

68. – 71. (Canceled)